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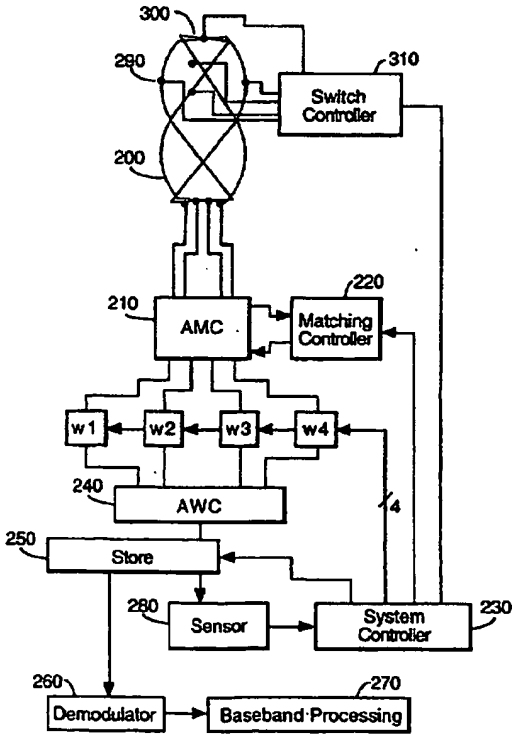
(54) Abstract Title
Adaptive multifilar antenna

(57) An adaptive multifilar antenna comprises a plurality of filaments 200, formed into a number of groups of filaments, the group members being coupled together in a fixed phase relationship, a detector 280 to detect at least one of the following: the frequency, polarisation or direction of a transceived signal or the input impedance of the antenna, and a controller 230 responsive to the detector to control a weighting circuit 240 so as to apply phase adjustments to the filaments or filament groups. Preferably there are 4 filaments arranged in two groups of two which are fed 180 degrees apart in phase (Figure 5 and 6) and which form a helix. Preferably the weighting circuit 240 adjusts the relative gains of the filaments and a matching circuit 210 is provided for altering the impedance of the antenna. The control means may also open or close switches associated with the filaments for interconnecting the filaments or for changing their electrical lengths 310. The detector may be operable during reception of a reference signal to detect the signal to noise ratio, signal magnitude or VWSR of the signal, and may comprise an A/D convertor so that the analysis of the detected properties may be performed digitally (adjusting for the relative phases and gains of the filaments).

Fig.2.



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